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ROAD CLOSURE - RAVENSHOE ROAD PROUT ROAD TO WEIR'S SIDEROAD, TOWN OF GEORGINA

The Transportation and Works Committee recommends the adoption of the recommendations contained in the following report, May 30, 2007, from the General Manager, Roads:

1. RECOMMENDATIONS

It is recommended that:

1. The Commissioner of Transportation and Works be authorized to exercise any of the powers of Regional Council for the temporary closure of Ravenshoe Road (Y.R. 32) from east of Prout Road to Weir's Sideroad, to through traffic commencing in late summer of 2007 and remain closed for the duration of construction which is anticipated to be 18 to 24 months.
2. The Regional Solicitor prepare the necessary by-laws.
3. Staff be directed to finalize an agreement with the Town of Georgina to use Old Shiloh Road, as a detour route while Ravenshoe Road is temporarily closed.
4. Regional Council authorize that the purchase order (P.O.) to Delcan Corporation for the consultant assignment be increased by the amount of \$98,000.00 from \$364,573.00 to \$462,573.00 exclusive of G.S.T.
5. The Regional Clerk forward this report to the Clerks of the Regional Municipality of Durham and the Towns of Georgina and Uxbridge and the Chief of Police.

2. PURPOSE

The purpose of this report is to provide an update on the existing condition of Ravenshoe Road and to seek endorsement from Regional Council to authorize the Commissioner of Transportation and Works Department to temporarily close Ravenshoe Road and direct staff to finalize an agreement to use Old Shiloh Road as a detour route (*see Attachment 1*). The *Municipal Act* requires Regional Council authorization to temporarily close roads for the purposes of construction or maintenance. Endorsement is also sought to authorize the payment of additional fees for completion of detailed design and tender documents.

3. BACKGROUND

Ravenshoe Road is a two lane rural cross-section with narrow to no shoulders and open ditches. Ravenshoe Road was a gravel road until it was surface treated by the Region in 1998. It is proposed that Ravenshoe Road be improved to comply with Regional standards with two 3.5m lanes and standard shoulders. Traffic volume along this section of Ravenshoe Road is approximately an Average Annual Daily Traffic (AADT) of 2300.

The existing Zephyr Creek Bridge which was built in 1952 is located within the project limits and consists of a two span timber structure. It is proposed that this bridge be replaced with a 16m single span steel girder bridge on the current road alignment but raised 2m above the existing road.

In 1999, a purchase order was issued to Delcan Corporation (Delcan) for undertaking both, a Class Environmental Assessment Study (Class EA) and the detailed design of Ravenshoe Road from Prout Road to Lake Ridge Road. The Class EA was completed in September 2002. Detailed design for the section of Ravenshoe Road from Prout Road to Weir's Sideroad was progressing towards a 2008 tender date as per the Region's then 10-Year Capital Construction Program.

The project has been brought forward in the Region's 2007 10-Year Capital Construction Program to tender the project in 2007. Currently, there is a need to continue maintaining Ravenshoe Road in a state of good repair. Considering that Ravenshoe Road will require to be temporarily closed during construction, it is proposed to bring forward the closure in order to avoid expenditure towards maintenance. The intent is to use Old Shiloh Road as a detour route during the closure period.

4. ANALYSIS AND OPTIONS

The issues requiring Council approval include:

- Permission to temporarily close Ravenshoe Road between Prout Road and Weir's Sideroad for the duration of construction.
- Permission to use Old Shiloh Road, in the jurisdiction of the Town of Georgina, as a detour route.
- Authorization to pay Delcan additional fees for the completion of detailed design and tender documents.

4.1 Ravenshoe Road Temporary Closure to Through Traffic

The construction of Ravenshoe Road is proposed to be undertaken over 18 to 24 months for the following reasons:

- The existing Zephyr Creek Bridge is located approximately 2 km east of Prout Road and has a load restriction of ten tons and therefore construction trucks cannot go over the existing bridge in order to construct east of the bridge until it has been replaced.
- The section of Ravenshoe Road from east of the Zephyr Creek Bridge to Weir's Sideroad cannot be accessed by construction vehicles from the east for lack of haul routes.
- There are environmental timing constraints for the in-water works at Zephyr Creek and therefore the structure construction cannot be undertaken between March 30 and July 1 of any year.
- Considering the length of road and the haul route constraint, the construction of this 6.3 km section of roadway cannot be undertaken within one construction season.

During construction, Ravenshoe Road cannot be maintained open to traffic because of the narrow existing road platform and the need to replace the existing timber bridge structure on Zephyr Creek. The proposed bridge will be 2m higher than the existing bridge and therefore the road has to be closed to allow the construction of the structure and approaches. The existing roadway in some sections extends over a wetland and is founded on a layer of peat. It is proposed to fully reconstruct the pavement in the wetland locations making it very difficult to safely maintain two-way traffic during construction on the existing narrow road platform.

Where possible, Regional staff co-ordinate the construction activities to keep the roads open to through-traffic. However, it is not always feasible to maintain through-traffic because of the nature of the work. Often, it is safer and more cost-effective to complete the work under a temporary full road closure. Alternatives to the closure including an on site off-alignment detour and construction staging have been considered, and it has been determined that a temporary road closure is preferred.

Temporary road closures, where implemented, reduce safety risks to both the travelling public and work crews and provide a work environment that enhances construction quality. Furthermore, temporary closures significantly reduce the costs and time scheduled for any work, thus minimizing public impact and disruption.

The condition of Ravenshoe Road within the project limits has deteriorated. There is a requirement to undertake major interim road maintenance work this year in order to safely keep it open to traffic. However, considering that a major capital project is now programmed for construction in 2007, Operations staff have been carrying out minor road repairs by patching small sections. If the temporary road closure is brought forward to late summer, then not only can utility relocations be undertaken while the road is closed but also the Region would avoid further funding of road maintenance activities.

Old Shiloh Road which is located parallel to and 1.4 km to the north of Ravenshoe Road, is a suitable detour route. Ravenshoe Road can be closed to through traffic while maintaining access to only local residences that have driveways off Ravenshoe Road.

It is proposed that Ravenshoe Road be closed as soon as preparatory work on Old Shiloh Road including repair to localized pavement areas, temporary traffic signals and detour signage is complete and traffic is diverted. Ravenshoe Road shall remain closed for the duration of construction and it is currently anticipated to be open by the fall of 2009.

In order to complete the construction of Ravenshoe Road, it is necessary to temporarily close this section of Ravenshoe Road to through-traffic. The *Municipal Act* allows municipal council to delegate authority to temporarily close roads for the purposes of construction or maintenance.

4.2 Old Shiloh Road Detour Route

It is proposed to temporarily close Ravenshoe Road at Prout Road and divert eastbound traffic north on Prout Road to Old Shiloh Road, then east on Old Shiloh Road to Weir's Sideroad and south to Ravenshoe Road. Prout Road and Weir's Sideroad are two lane roads with asphalt pavement. Old Shiloh Road is a two lane local road within the jurisdiction of the Town of Georgina. The pavement on Old Shiloh Road consists of surface treated gravel surface. The roadway surface is generally in good condition with some localized sections exhibiting signs of distress.

There is a single lane bridge on Old Shiloh Road over Zephyr Creek, east of Prout Road. The bridge was constructed in 1950 and is a single span concrete girder bridge. The structure has been recently inspected and is in generally good condition.

Regional staff have discussed the proposal with Town staff and the initial feedback has been favourable. The Region has proposed to undertake minor preparatory work to repair localized deteriorated sections of roadway that are currently in need of repair. In addition, the Region proposes to install temporary traffic signal controls at the structure in order to allow orderly flow of two-lane traffic across the one-lane structure.

It is anticipated that when Ravenshoe Road is temporarily closed to through traffic only a portion of Ravenshoe Road traffic (AADT is 2300) will use the Old Shiloh Road detour, as there are other complementary roads in York and Durham Regions that provide secondary opportunities for access to local residents. However, it is recommended that the Region prepare Old Shiloh Road to carry the additional number of vehicles that would be carried on Ravenshoe Road. Any preparatory work would be in lieu of spending funds to repair Ravenshoe Road in order to keep it open to traffic prior to construction. While expenditure on maintaining Ravenshoe Road in good repair would be throwaway costs, any works undertaken on Old Shiloh Road would upgrade the Town's existing infrastructure and benefit the local community.

4.3 Public Notification and Mitigation

Public consultation will be undertaken prior to closure to inform local residents and agencies, including a public meeting, hand delivered notices, ads in newspaper, emergency services, etc.

Notification of the temporary road closure will be placed on arterial and local roads at least two weeks prior to the closure period along with advertisements in the local newspapers. All emergency public service agencies (police, fire and ambulance) and public and school transit authorities will be informed of the closure. Temporary road closure notice will also be posted on the York Region website.

A detailed signage plan will be put in place for the closure to clearly identify the detour route. Measures will also be provided to maintain local access to residents, businesses, schools and other institutions. Property owners that will be directly affected by the closure will be notified of the construction by hand delivered flyers.

The contractor will be obligated to ensure effective use of the closure period and to minimize impact and inconvenience to the public through effective work planning and operations. The contractor will open the road to traffic as soon as possible after completion of the scheduled work.

4.4 Request for Additional Design Fees

The detailed design has been delayed because of various issues that were identified through the Class EA study including fisheries compensation, extensive hydraulic analysis, etc. The original upset limit for this assignment to undertake the Class EA study and detailed design was set at \$225,610 plus GST. During the course of this assignment various unanticipated and/or additional activities necessitated the approval of additional work activities including such tasks as an additional public meeting, more intensive geotechnical investigations, hydraulic analysis for the complete replacement of an existing bridge structure, detailed structural designs and specifications for a significantly larger than anticipated bridge and for a detailed ground/surface water report for submission to the Department of Fisheries and Oceans (DFO) and Lake Simcoe Region Conservation Authority (LSRCA). Accordingly, the original purchase order has been revised to a total of \$364,573 plus GST.

The detailed design phase of the project has been ongoing since 2002 and is at an advanced stage. Delcan had initially quoted only \$59,465 for the detailed design of 6.3 km of roadway.

The reconstruction of Ravenshoe Road from Prout Road to Weir's Sideroad has been brought forward in the Region's new 2007 10-Year Capital Program due to the accelerated deterioration of the roadway. A tender package is required for tender in 2007. Delcan has requested additional fees in order to complete the assignment for tender in 2007 for the following reasons:

- The Region's requirements on consultant assignments have changed dramatically since this project was commenced in 1999 which Delcan could not have anticipated.
- Region standards and specifications for roadwork have changed and therefore information in previous 100% submissions needs to be revised.

- The site conditions have changed from the time when the initial survey and site review was done.
- The scope of work has changed to include review of geotechnical considerations on Ravenshoe Road due to deteriorating roadway, review and prepare drawings for preparatory work on Old Shiloh Road, temporary road closure and detour signing.

Delcan's request for additional fees is in the amount of \$98,000.00. Regional staff have reviewed the request and consider it to be fair and reasonable. The amount of increase exceeds what can be accommodated through staff's authority within the Purchasing By-law. If the request for additional fees is authorized by Regional Council, the revised purchase order amount would be \$462,573.00 as follows:

Original P.O. amount	\$225,610.00
Additional funds approved through activation of 15% and 20% contingencies	\$78,963.00
Additional funds requested via Fast Track Approval Form	\$60,000.00
Additional funds being requested via Regional Council authorization	\$98,000.00
Proposed new P.O. amount excluding G.S.T.	\$462,573.00

The total amount of the assignment to undertake a Class EA study and detailed design of 6.3 km or roadway is also very reasonable. In comparison, a similar assignment if awarded this year would be funded by the Region in the order of \$800,000 to \$1,000,000 fee range.

Council approval to close Ravenshoe Road and authorization to pay additional fees would:

- Allow Ravenshoe Road to be temporary closed to through traffic and avoid spending significant maintenance budget to keep Ravenshoe Road open, expenditure that is essentially throwaway.
- Allow construction activities to proceed in a safe and expedient manner including utility relocation and structure construction.
- Permit the Region to use Old Shiloh Road as a detour route. The cost of maintaining Old Shiloh Road or re-instating to acceptable condition post-construction will benefit the Town of Georgina and local community by maintaining/improving existing infrastructure.
- Allow Delcan to complete the tender package for tender in 2007 in accordance with the Region's current 10-Year Capital Program.

4.5 Project Schedule

As required by the Purchasing Bylaw, endorsement is being sought before further design work that is subject to additional fees, is undertaken. Once approved the tender package

can be completed by fall of 2007. Old Shiloh Road detour will be in place by late summer. Utility relocations will commence shortly after closure of the road and will be completed by the end of 2007.

Property acquisition is currently underway. Properties on the north side of Ravenshoe Road are within York Region while the properties on the south side are within Durham Region. Realty Services have made significant progress and only a few properties remain to be acquired on both the Durham and York Region sides. Expropriation is underway and it is anticipated that all property acquisition will be complete by October 2007.

Once all property has been acquired, the Region intends to commence construction of Ravenshoe Road in the fall/winter of 2007. The structure replacement and roadworks west of the structure will be undertaken as the first phase of the project. Roadworks, east of the structure will be undertaken as Phase 2. It is anticipated that the construction will be completed by the fall of 2009.

5. FINANCIAL IMPLICATIONS

The financial impact to The Region associated with the closure of Ravenshoe Road would be associated with maintaining Old Shiloh Road as a detour route. There would be significantly more expenditure in maintaining Ravenshoe Road open prior to and during construction.

The financial impact to the Region with respect to the authorization of additional fees to complete the detailed design and tender documents is \$98,000.00. There are sufficient funds allocated in the 2007 project budget.

6. LOCAL MUNICIPAL IMPACT

The Ravenshoe Road improvements will be constructed in the Town of Georgina. The reconstruction of Ravenshoe Road within the project limits will provide substantial community and transportation benefits to the Town of Georgina. The project will improve the roadway geometrics, quality of infrastructure, safety and operations for the travelling public.

Temporary construction impacts will be mainly with respect to the temporary and localized road closure of Ravenshoe Road between Prout Road and Weir's Sideroad. However, Old Shiloh Road is a suitable detour located in close proximity to Ravenshoe Road.

Staff of the Town of Georgina have been contacted and concur with the proposed temporary closure and the use of Old Shiloh Road as a detour route. We will be notifying

staff at the Regional Municipality of Durham and the Town of Uxbridge in due course. All agencies will be advised formerly, a minimum of two weeks prior to the closure.

Public consultation will be undertaken prior to closure to inform local residents, including a public meeting, hand delivered notices, ads in newspaper, emergency services, etc.

Throughout the construction project, the public will be kept informed of the construction progress.

7. CONCLUSION

The authorization to pay additional fees to Delcan will enable The Region to complete the detailed design and tender documents for tender in 2007 in accordance with the Region's current 10-Year Capital Program.

Under the *Municipal Act*, Regional Council may delegate authority to temporarily close roads. The approval to temporarily close Ravenshoe Road commencing in the summer of 2007 to the end of construction in the fall of 2009 and to use Old Shiloh Road as a detour route will enable the Region to complete the road reconstruction in a safe, expedient and cost effective manner.

For more information on this report contact Dino Basso, Director, Capital Delivery, Roads Branch at extension 5902 in the Transportation and Works Department.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the agenda for the June 13, 2007 Committee meeting.)